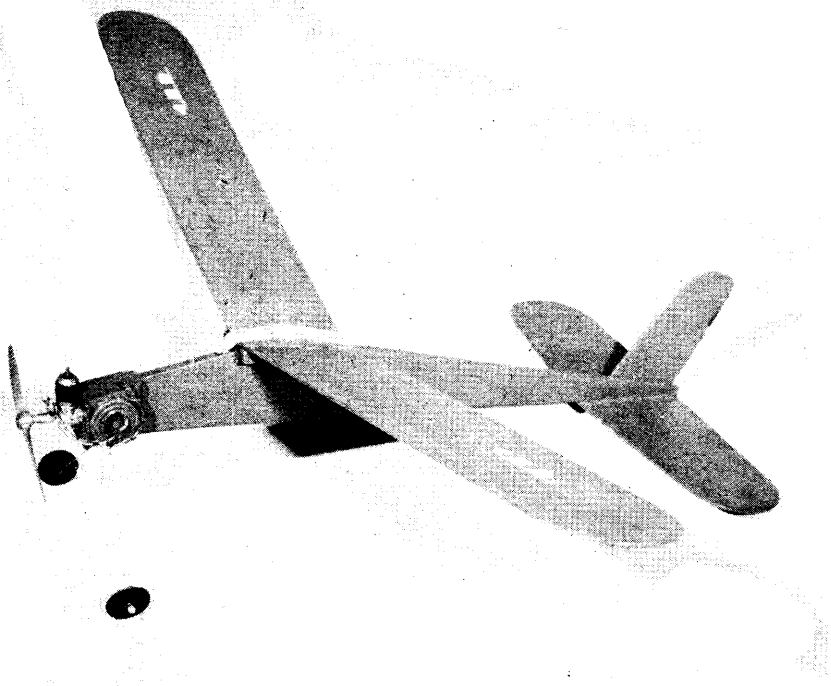

Engine bolts to plywood, cemented to fuselage front-side blocks strengthen assembly. Coiled tubing makes a substitute tank—but don't fill the engine with fuel.

UGLY DUCKLING

Can't claim that these ships cannot be broken—one got caught in a door. Glide pretty good, too, so don't send up high on a hot day. Use glider stock in wings.

Showing photographer, just for fun, how they start Cub on the field, boys didn't know this shot was taken. Slip-on lead would be big improvement. Show 'em!

Experts, bear with us! This one is for the younger fellows who are yelling for an easy free flight that flies and can't crack up.

This probably is the first model airplane to be published that does not have a designer. If, perhaps, the name suggests that the designer is really afraid to step forward, it should be remembered that the ugly duckling of the fable turned into a beautiful swan. This is the story of our ugly duckling.

After the local junior flying circus had plumb wore out the valiant Veco Dakota—but not its Cub engine which still starts on a flip or two after six months of yeoman service—some suitable replacement was needed. This had to be something not a kit, for all new modelers should have a jam session whittling out their own pieces. The ship should require no design, be buildable by anyone strong enough to hold a pencil, and with the ability to push it, and it should fly. So, by rule of thumb, a lot of straight lines were put on pieces of wood and the small fry were told to cut here and don't come back until the pieces are cemented together.

Two of these junior birdmen immediately came up with finished airplanes—and not bad ones at that. Even color doped, one red and the other blue. If these ungainly looking ships didn't fly—incidentally, they look beautiful to a guy who has just made his first gassie!—well . . . But they flew, and flew well enough to replace the local Dakotas, in the boys' estimation. If the Dakota was designed to go in circles for safety, this "playing mantis," the Ugly Duckling, would go safely in any direction, right or left. If it wound, it would go around a complete circle wing tip just grazing the ground. A little trim tab on the fin is all that is needed to fly left or right.

The sizes are given on the plan. The plan isn't full size, fellows, because this is a pretty big ship to get full size on magazine pages and we don't want to make you younger fliers have to send away for a plan. The drawings are simple: the measurements are given and the lines are straight ones except for the stabilizer tips, which are circles. Use a compass or a bowl—heck, change the shape any way you want. Makes no dif!

That thick slab of wood for the body came from Jasco. More popular sizes were not suitable for such a big .049 job. Other places stock these materials, too. The reason for the long thin wing is that it is made from standard 4-in. wide glider wing stock. All you have to do is sand down the sharp ridges with a sanding block, rubbing in the direction of the grain. If you can't get glider stock, work with 4-in. sheet—fairly soft stuff—and work it to shape with a sanding block using medium, then fine, paper. You don't have to put dowels along the leading edges but they do help protect the wood from nicks. The dowels are 1/8 in. Flatten the leading edge slightly, lay the wood on wax paper, and insert pins into the bench to hold the dowels in place while the cement dries. The gas tank should be a small one—ask your dealer—to avoid flying away. But neoprene fuel line tubing can be wound as shown in the picture.

Coil it up on the bench and color dope with fuelproof dope. When dry, cement to the fuselage side, holding in place with some pins. Cut off the heads and bend U-shape. Color dope over all. Run the engine rich and you'll barely have time to get the plane off for a short test flight. Leaned out, a normal flight results. Hand glide first, and jack up the front of the wing a little if nose heavy, or back of wing if tail heavy. END